

The Skeptic Zone  
Show 382 - 14 Feb 2016



Jo Alabaster

1  
00:00:27,750 --> 00:00:19,349  
no damn those gravitational waves

2  
00:00:42,830 --> 00:00:30,390  
welcome to the skeptic zone the podcast

3  
00:00:48,709 --> 00:00:45,670  
reason hello and welcome to the skeptic

4  
00:00:51,590 --> 00:00:48,719  
zone episode number 382 for the 14th of

5  
00:00:54,790 --> 00:00:51,600  
february ah happy valentine's day

6  
00:00:56,709 --> 00:00:54,800  
2016 richard saunders here with you from

7  
00:01:02,470 --> 00:00:56,719  
jamboree

8  
00:01:03,750 --> 00:01:02,480  
southern side of sydney near the city of

9  
00:01:05,350 --> 00:01:03,760  
wollongong

10  
00:01:07,109 --> 00:01:05,360  
it's where my mother lives and i'm

11  
00:01:09,109 --> 00:01:07,119  
visiting mum at the moment

12  
00:01:10,710 --> 00:01:09,119  
and thanks to uh the wonders of the

13  
00:01:12,789 --> 00:01:10,720

internet and youtube we're enjoying

14

00:01:15,190 --> 00:01:12,799

watching lots of

15

00:01:17,510 --> 00:01:15,200

wonderful shows that mum enjoys that is

16

00:01:19,350 --> 00:01:17,520

if those pesky gravitational waves don't

17

00:01:20,710 --> 00:01:19,360

get in our way now that was an

18

00:01:21,990 --> 00:01:20,720

interesting story that just happened

19

00:01:24,310 --> 00:01:22,000

this week

20

00:01:26,630 --> 00:01:24,320

two black holes

21

00:01:28,310 --> 00:01:26,640

colliding merging

22

00:01:30,870 --> 00:01:28,320

1.3

23

00:01:33,270 --> 00:01:30,880

billion years ago

24

00:01:35,109 --> 00:01:33,280

in the far reaches of space and only

25

00:01:37,270 --> 00:01:35,119

this week the uh

26

00:01:38,950 --> 00:01:37,280

the ripples

27

00:01:42,390 --> 00:01:38,960

in space-time

28

00:01:45,510 --> 00:01:42,400

were detected on earth using mirrors

29

00:01:47,510 --> 00:01:45,520

mirrors it's extraordinary suspended

30

00:01:50,550 --> 00:01:47,520

mirrors and multiple mirrors around the

31

00:01:51,990 --> 00:01:50,560

planet to make sure once again a wonder

32

00:01:54,630 --> 00:01:52,000

uh

33

00:01:56,950 --> 00:01:54,640

a wonder brought to us by science not

34

00:01:59,830 --> 00:01:56,960

magic not pseudoscience

35

00:02:01,990 --> 00:01:59,840

not mysticism not the paranormal not the

36

00:02:02,950 --> 00:02:02,000

supernatural

37

00:02:05,670 --> 00:02:02,960

just

38

00:02:07,749 --> 00:02:05,680

plain good old-fashioned science but

39

00:02:09,749 --> 00:02:07,759

what's coming up on this week's episode

40

00:02:11,910 --> 00:02:09,759

of the skeptic zone joe alabaster

41

00:02:14,630 --> 00:02:11,920

evidence please joe

42

00:02:16,030 --> 00:02:14,640

a keen gardener a king gardener herself

43

00:02:18,630 --> 00:02:16,040

looks at

44

00:02:20,550 --> 00:02:18,640

biodynamic gardening

45

00:02:23,030 --> 00:02:20,560

gardening with a

46

00:02:24,630 --> 00:02:23,040

touch of woo woo

47

00:02:27,990 --> 00:02:24,640

you can grow your vegetables by the

48

00:02:31,030 --> 00:02:28,000

light of the full moon or not find out

49

00:02:32,390 --> 00:02:31,040

more evidence please with joe alabaster

50

00:02:34,150 --> 00:02:32,400

following that it's a week in science

51  
00:02:37,110 --> 00:02:34,160  
from the royal institution of australia

52  
00:02:39,830 --> 00:02:37,120  
www.ria

53  
00:02:41,670 --> 00:02:39,840  
dot a u it's an older one it's a repeat

54  
00:02:43,910 --> 00:02:41,680  
you might have heard it before

55  
00:02:45,030 --> 00:02:43,920  
worth listening to again

56  
00:02:47,589 --> 00:02:45,040  
then following that a little

57  
00:02:51,030 --> 00:02:47,599  
investigation little report i should say

58  
00:02:52,229 --> 00:02:51,040  
about a certain psychic in the uk by the

59  
00:02:53,589 --> 00:02:52,239  
name of

60  
00:02:55,270 --> 00:02:53,599  
liliane

61  
00:02:56,869 --> 00:02:55,280  
who was caught

62  
00:02:59,430 --> 00:02:56,879  
red-handed

63  
00:03:02,309 --> 00:02:59,440

sending out the identical reading

64

00:03:04,710 --> 00:03:02,319

letters from heaven to multiple clients

65

00:03:07,190 --> 00:03:04,720

oh dear dear so we're going to look at

66

00:03:09,350 --> 00:03:07,200

that we're going to hear

67

00:03:11,270 --> 00:03:09,360

what that reading was

68

00:03:13,589 --> 00:03:11,280

and we'll be discussing the barnum

69

00:03:15,270 --> 00:03:13,599

effect and other cold reading type

70

00:03:18,070 --> 00:03:15,280

statements with the help

71

00:03:19,910 --> 00:03:18,080

with the help of a clip from james randy

72

00:03:21,750 --> 00:03:19,920

now before we get stuck into the show

73

00:03:23,509 --> 00:03:21,760

this has come to my attention just in

74

00:03:24,869 --> 00:03:23,519

the last few days thank you joe

75

00:03:27,750 --> 00:03:24,879

alabaster

76

00:03:30,789 --> 00:03:27,760

an evening with alan alder

77

00:03:32,789 --> 00:03:30,799

holy moly getting beyond a blind date

78

00:03:35,030 --> 00:03:32,799

with science allen alder will be

79

00:03:38,309 --> 00:03:35,040

appearing at the australian national

80

00:03:41,030 --> 00:03:38,319

university in canberra on march the 8th

81

00:03:42,949 --> 00:03:41,040

tuesday march the 8th now no kickbacks

82

00:03:44,309 --> 00:03:42,959

for me for this i'm simply announcing

83

00:03:47,589 --> 00:03:44,319

this because

84

00:03:48,550 --> 00:03:47,599

as a uh a fan of alan alder for many

85

00:03:50,390 --> 00:03:48,560

years

86

00:03:52,789 --> 00:03:50,400

and only partially because of his acting

87

00:03:55,110 --> 00:03:52,799

work which is great if you saw him in

88

00:03:57,270 --> 00:03:55,120

the west wing for example my goodness me

89

00:03:59,190 --> 00:03:57,280

what a fine performance it was

90

00:04:01,830 --> 00:03:59,200

and not forgetting his uh

91

00:04:03,750 --> 00:04:01,840

performances as hawkeye pierce in mash

92

00:04:05,670 --> 00:04:03,760

now what really um

93

00:04:08,229 --> 00:04:05,680

really impressed me with the alan alda

94

00:04:11,110 --> 00:04:08,239

is his passion and his ability to

95

00:04:13,429 --> 00:04:11,120

communicate science including many years

96

00:04:15,429 --> 00:04:13,439

being the host of tv the tv series

97

00:04:17,670 --> 00:04:15,439

scientific american frontiers which i

98

00:04:20,710 --> 00:04:17,680

think you could probably find on youtube

99

00:04:21,990 --> 00:04:20,720

anyway i think i might just

100

00:04:24,390 --> 00:04:22,000

find myself

101  
00:04:25,990 --> 00:04:24,400  
in the audience on that evening if you

102  
00:04:27,990 --> 00:04:26,000  
want to find out more there i'll put a

103  
00:04:30,390 --> 00:04:28,000  
link on the show notes or just google an

104  
00:04:32,230 --> 00:04:30,400  
evening with alan alder

105  
00:04:34,629 --> 00:04:32,240  
australian national

106  
00:04:37,830 --> 00:04:34,639  
university and of course i send my best

107  
00:04:40,550 --> 00:04:37,840  
wishes earth to dr richard dawkins who

108  
00:04:43,110 --> 00:04:40,560  
was recovering from a stroke he had a

109  
00:04:44,390 --> 00:04:43,120  
minor stroke it would appear

110  
00:04:46,310 --> 00:04:44,400  
the other day

111  
00:04:47,189 --> 00:04:46,320  
he's out of hospital

112  
00:04:50,070 --> 00:04:47,199  
and

113  
00:04:51,830 --> 00:04:50,080

by all accounts he is recovering there's

114

00:04:55,030 --> 00:04:51,840

a man who certainly

115

00:04:56,469 --> 00:04:55,040

caught controversy in many spheres as we

116

00:04:58,870 --> 00:04:56,479

all know

117

00:05:01,350 --> 00:04:58,880

but of course i wish him all the best

118

00:05:03,270 --> 00:05:01,360

for a speeding recovery

119

00:05:04,710 --> 00:05:03,280

but now it's time for me to get off this

120

00:05:06,230 --> 00:05:04,720

chair

121

00:05:09,270 --> 00:05:06,240

walk around

122

00:05:12,790 --> 00:05:09,280

the corner here into the kitchen

123

00:05:17,189 --> 00:05:15,189

what do we have here

124

00:05:18,230 --> 00:05:17,199

some leftover chocolate cake from mum's

125

00:05:20,710 --> 00:05:18,240

birthday

126  
00:05:41,830 --> 00:05:20,720  
while i munch that i hope you enjoy the

127  
00:05:46,230 --> 00:05:44,230  
what we want is some more evidence

128  
00:05:51,350 --> 00:05:46,240  
please

129  
00:05:51,360 --> 00:05:58,230  
hello this is joe alabasta

130  
00:06:03,990 --> 00:06:01,510  
in the early 1920s farmers in germany

131  
00:06:05,830 --> 00:06:04,000  
were noticing degraded soil conditions

132  
00:06:07,990 --> 00:06:05,840  
and a deterioration in the health and

133  
00:06:10,070 --> 00:06:08,000  
quality of their crops and livestock and

134  
00:06:11,270 --> 00:06:10,080  
this came to the attention of rudolf

135  
00:06:13,990 --> 00:06:11,280  
steiner

136  
00:06:15,990 --> 00:06:14,000  
an austrian philosopher and esotericist

137  
00:06:17,870 --> 00:06:16,000  
rudolf steiner was the pioneer of

138  
00:06:21,110 --> 00:06:17,880

waldorf steiner education

139

00:06:23,270 --> 00:06:21,120

anthroposophical medicine and biodynamic

140

00:06:25,110 --> 00:06:23,280

agriculture all of which are still

141

00:06:28,070 --> 00:06:25,120

practiced today

142

00:06:31,430 --> 00:06:28,080

biodynamic wines yogurts superfoods and

143

00:06:32,309 --> 00:06:31,440

cosmetics are sold at a premium price

144

00:06:34,870 --> 00:06:32,319

why

145

00:06:37,270 --> 00:06:34,880

what is it that biodynamic certification

146

00:06:40,710 --> 00:06:37,280

assures us of that isn't a part of

147

00:06:43,510 --> 00:06:40,720

regular organic agricultural practice

148

00:06:45,990 --> 00:06:43,520

well biodynamic farming methods are

149

00:06:48,550 --> 00:06:46,000

similar to organic farming methods in

150

00:06:51,029 --> 00:06:48,560

that they prohibit the use of gmos

151  
00:06:53,749 --> 00:06:51,039  
synthetic chemicals fertilizers or

152  
00:06:55,670 --> 00:06:53,759  
pesticides but there's an added layer of

153  
00:06:57,510 --> 00:06:55,680  
philosophy and steiner prescribed

154  
00:06:59,670 --> 00:06:57,520  
methods and practices on top of the

155  
00:07:01,510 --> 00:06:59,680  
standard no chemicals rule

156  
00:07:04,309 --> 00:07:01,520  
and i know all matter is composed of

157  
00:07:05,309 --> 00:07:04,319  
chemicals and drastic battery too

158  
00:07:07,189 --> 00:07:05,319  
from

159  
00:07:08,550 --> 00:07:07,199  
biodynamics.com

160  
00:07:11,430 --> 00:07:08,560  
quote

161  
00:07:13,749 --> 00:07:11,440  
biodynamics is ultimately not just a set

162  
00:07:15,909 --> 00:07:13,759  
of alternative agricultural methods but

163  
00:07:17,830 --> 00:07:15,919

a way of seeing and understanding the

164

00:07:20,469 --> 00:07:17,840

natural world

165

00:07:22,870 --> 00:07:20,479

steiner called for and pioneered a new

166

00:07:25,270 --> 00:07:22,880

form of science which he called

167

00:07:28,309 --> 00:07:25,280

spiritual science that could grapple

168

00:07:31,589 --> 00:07:28,319

with both the material and non-material

169

00:07:34,150 --> 00:07:31,599

or spiritual aspects of reality

170

00:07:36,629 --> 00:07:34,160

biodynamic farmers work to develop their

171

00:07:39,350 --> 00:07:36,639

capacity to sense and observe the more

172

00:07:41,830 --> 00:07:39,360

subtle forces at work in nature and to

173

00:07:44,790 --> 00:07:41,840

use their own insights to further

174

00:07:46,790 --> 00:07:44,800

enhance the vitality of their farms the

175

00:07:49,110 --> 00:07:46,800

biodynamic methods are thus in a

176

00:07:51,670 --> 00:07:49,120

continuous state of evolution and

177

00:07:53,749 --> 00:07:51,680

individualization

178

00:07:56,790 --> 00:07:53,759

as part of his work on a new approach to

179

00:07:58,869 --> 00:07:56,800

science steiner also developed together

180

00:08:00,790 --> 00:07:58,879

with a number of colleagues a set of

181

00:08:02,869 --> 00:08:00,800

unique scientific methods for

182

00:08:05,749 --> 00:08:02,879

demonstrating the presence of life

183

00:08:09,189 --> 00:08:05,759

forces in nature and for evaluating the

184

00:08:10,950 --> 00:08:09,199

quality and vitality of food and soil

185

00:08:12,629 --> 00:08:10,960

these methods sometimes called the

186

00:08:14,469 --> 00:08:12,639

picture-forming methods

187

00:08:17,110 --> 00:08:14,479

are finding growing acceptance in

188

00:08:18,790 --> 00:08:17,120

scientific circles in europe

189

00:08:21,110 --> 00:08:18,800

these and other traditional forms of

190

00:08:23,830 --> 00:08:21,120

scientific research have consistently

191

00:08:25,029 --> 00:08:23,840

demonstrated the benefits of biodynamic

192

00:08:27,270 --> 00:08:25,039

methods

193

00:08:30,150 --> 00:08:27,280

end quote

194

00:08:32,389 --> 00:08:30,160

well spiritual science

195

00:08:35,509 --> 00:08:32,399

spiritual science looks into that which

196

00:08:37,670 --> 00:08:35,519

is beyond science as we define it it

197

00:08:40,389 --> 00:08:37,680

deals with the supernatural concepts

198

00:08:43,350 --> 00:08:40,399

which are not empirically derived and

199

00:08:45,590 --> 00:08:43,360

are neither reproducible nor testable

200

00:08:47,910 --> 00:08:45,600

yet steiner declared it to be scientific

201  
00:08:49,590 --> 00:08:47,920  
regardless and this mode of thinking is

202  
00:08:51,590 --> 00:08:49,600  
seen throughout all of the endeavours he

203  
00:08:53,269 --> 00:08:51,600  
established

204  
00:08:56,070 --> 00:08:53,279  
what are the scientifically proven

205  
00:08:57,910 --> 00:08:56,080  
benefits of biodynamic agriculture

206  
00:09:00,310 --> 00:08:57,920  
well they're indistinguishable from

207  
00:09:02,070 --> 00:09:00,320  
regular organic farming methods

208  
00:09:03,110 --> 00:09:02,080  
compared to conventional agricultural

209  
00:09:05,990 --> 00:09:03,120  
methods

210  
00:09:08,150 --> 00:09:06,000  
organic and biodynamic farms tend to

211  
00:09:10,790 --> 00:09:08,160  
have higher earthworm populations and

212  
00:09:12,470 --> 00:09:10,800  
increased biomass but lower yields of

213  
00:09:14,949 --> 00:09:12,480

produce

214

00:09:17,190 --> 00:09:14,959

the extra work that biodynamic farmers

215

00:09:19,430 --> 00:09:17,200

put in to meet with steiner's methods is

216

00:09:21,590 --> 00:09:19,440

quite astounding though

217

00:09:24,470 --> 00:09:21,600

an example of the sort of practices that

218

00:09:26,990 --> 00:09:24,480

stoner prescribed for biodynamic farmers

219

00:09:30,110 --> 00:09:27,000

is the preparation and use of

220

00:09:34,829 --> 00:09:30,120

biodynamic preparation 500

221

00:09:38,389 --> 00:09:34,839

bd500 a crop spray used to inoculate

222

00:09:40,389 --> 00:09:38,399

soil bd500 must be prepared in very

223

00:09:42,949 --> 00:09:40,399

specific ways

224

00:09:45,190 --> 00:09:42,959

in early autumn a farmer is to take an

225

00:09:47,750 --> 00:09:45,200

empty horn from a cow which has had a

226

00:09:49,269 --> 00:09:47,760

calf and fill it with the fresh manure

227

00:09:52,470 --> 00:09:49,279

of a cow which is grazed on

228

00:09:53,910 --> 00:09:52,480

biodynamically worked pasture

229

00:09:56,870 --> 00:09:53,920

the horn is then to be buried

230

00:09:59,110 --> 00:09:56,880

underground in a fertile area of a field

231

00:10:01,030 --> 00:09:59,120

or garden until spring

232

00:10:03,350 --> 00:10:01,040

when it's dug up and the contents of the

233

00:10:06,310 --> 00:10:03,360

horn are removed and stored in a loose

234

00:10:10,509 --> 00:10:06,320

lidded glass or earthenware jar in peat

235

00:10:14,069 --> 00:10:10,519

or soil away from any chemicals

236

00:10:17,110 --> 00:10:14,079

bd500 is applied at a rate of 35 grams

237

00:10:18,470 --> 00:10:17,120

of preparation in 13 liters of water per

238

00:10:20,550 --> 00:10:18,480

acre

239

00:10:23,110 --> 00:10:20,560

it is to be mixed in a vessel made of

240

00:10:25,509 --> 00:10:23,120

wood clay copper or stainless steel and

241

00:10:28,630 --> 00:10:25,519

the vessel must not be overfilled

242

00:10:31,269 --> 00:10:28,640

water must be clean from a dam or tank

243

00:10:33,030 --> 00:10:31,279

if using city water leave overnight to

244

00:10:34,630 --> 00:10:33,040

allow chemicals in the water to

245

00:10:37,670 --> 00:10:34,640

evaporate

246

00:10:40,230 --> 00:10:37,680

proper stirring technique is important

247

00:10:42,550 --> 00:10:40,240

begin by stirring in one direction until

248

00:10:44,870 --> 00:10:42,560

a vortex appears then reverse the

249

00:10:47,269 --> 00:10:44,880

direction until you create another one

250

00:10:49,509 --> 00:10:47,279

continue stirring and changing direction

251  
00:10:51,990 --> 00:10:49,519  
for one hour

252  
00:10:54,870 --> 00:10:52,000  
stirring small amounts of preparation in

253  
00:10:57,509 --> 00:10:54,880  
large amounts of water is referred to as

254  
00:11:00,389 --> 00:10:57,519  
dynamizing and is said to transfer

255  
00:11:03,670 --> 00:11:00,399  
forces and energy from the preparation

256  
00:11:07,990 --> 00:11:06,230  
bd500 needs to reach the ground in the

257  
00:11:10,230 --> 00:11:08,000  
form of droplets

258  
00:11:12,710 --> 00:11:10,240  
to apply to large areas of land use a

259  
00:11:14,790 --> 00:11:12,720  
backpack sprayer smaller areas can be

260  
00:11:17,269 --> 00:11:14,800  
treated by dipping a hand brush made of

261  
00:11:19,509 --> 00:11:17,279  
horse hair or another natural material

262  
00:11:21,990 --> 00:11:19,519  
into a bucket of preparation and

263  
00:11:24,310 --> 00:11:22,000

flicking it over the soil

264

00:11:26,389 --> 00:11:24,320

what's the point of it all

265

00:11:28,389 --> 00:11:26,399

it's said that the sphere of activity of

266

00:11:30,470 --> 00:11:28,399

the horn manure preparation

267

00:11:33,350 --> 00:11:30,480

is the soil life and root zone of the

268

00:11:35,350 --> 00:11:33,360

plant that it improves soil humus that

269

00:11:37,829 --> 00:11:35,360

it affects the dynamics of plant growth

270

00:11:39,350 --> 00:11:37,839

from germination to harvest

271

00:11:41,910 --> 00:11:39,360

it's best applied at the beginning of

272

00:11:44,470 --> 00:11:41,920

the growing season on a cloudy afternoon

273

00:11:47,910 --> 00:11:44,480

where soil is moist and on fields that

274

00:11:50,310 --> 00:11:47,920

are uncultivated or freshly turned

275

00:11:52,710 --> 00:11:50,320

there are several other preparations

276

00:11:53,750 --> 00:11:52,720

a similar cowhorn one using powdered

277

00:11:55,750 --> 00:11:53,760

quartz

278

00:11:59,230 --> 00:11:55,760

several for improving compost involving

279

00:12:02,870 --> 00:11:59,240

various herbs and animal organs

280

00:12:05,350 --> 00:12:02,880

bd502 is made from dried yarrow flowers

281

00:12:07,590 --> 00:12:05,360

placed in a stag's bladder in spring

282

00:12:09,509 --> 00:12:07,600

then hung from a tree until autumn

283

00:12:11,590 --> 00:12:09,519

buried in an earthenware container until

284

00:12:14,150 --> 00:12:11,600

the next spring

285

00:12:16,230 --> 00:12:14,160

then one tenth of a teaspoon is to be

286

00:12:17,430 --> 00:12:16,240

placed in the middle of a cubic meter of

287

00:12:19,190 --> 00:12:17,440

compost

288

00:12:21,590 --> 00:12:19,200

where it quote

289

00:12:24,150 --> 00:12:21,600

brings light forces into the soil via

290

00:12:26,870 --> 00:12:24,160

its connection with sulfur helping

291

00:12:29,269 --> 00:12:26,880

spirit to penetrate mata and enables it

292

00:12:31,430 --> 00:12:29,279

to attract trace elements

293

00:12:34,069 --> 00:12:31,440

important for reproduction and growth

294

00:12:35,509 --> 00:12:34,079

venous forces are said to manifest in

295

00:12:36,829 --> 00:12:35,519

yarrow

296

00:12:39,990 --> 00:12:36,839

end

297

00:12:41,990 --> 00:12:40,000

quote a biodynamics guide

298

00:12:44,310 --> 00:12:42,000

quote it's ideal to follow the

299

00:12:47,110 --> 00:12:44,320

application times from the biodynamic

300

00:12:49,509 --> 00:12:47,120

calendar to optimize cosmic influence

301  
00:12:52,069 --> 00:12:49,519  
end quote

302  
00:12:54,389 --> 00:12:52,079  
yes biodynamics incorporates an

303  
00:12:56,310 --> 00:12:54,399  
astrological calendar

304  
00:12:59,110 --> 00:12:56,320  
using the phases of the moon to organize

305  
00:13:00,710 --> 00:12:59,120  
when to plant fertilize and harvest kind

306  
00:13:03,190 --> 00:13:00,720  
of makes sense when you're living in a

307  
00:13:04,870 --> 00:13:03,200  
society which is lacking calendars

308  
00:13:06,790 --> 00:13:04,880  
and i suppose it still serves as a

309  
00:13:08,949 --> 00:13:06,800  
sensible enough way to track the passing

310  
00:13:10,389 --> 00:13:08,959  
of time and seasons but the magical

311  
00:13:12,550 --> 00:13:10,399  
thinking of astrology that's

312  
00:13:16,629 --> 00:13:12,560  
incorporated into these calendars

313  
00:13:19,430 --> 00:13:16,639

strikes me as quite unnecessary

314

00:13:21,110 --> 00:13:19,440

during the 90s and early 2000s if there

315

00:13:23,190 --> 00:13:21,120

wasn't a poster of an independent

316

00:13:25,110 --> 00:13:23,200

cinemas yearly program stuck behind the

317

00:13:27,750 --> 00:13:25,120

toilet door of a share house i lived in

318

00:13:30,150 --> 00:13:27,760

or visited there was almost certainly a

319

00:13:32,629 --> 00:13:30,160

moon planting poster in its place

320

00:13:34,550 --> 00:13:32,639

it's a fairly pervasive belief by no

321

00:13:36,710 --> 00:13:34,560

means limited to hardcore alternative

322

00:13:38,629 --> 00:13:36,720

gardeners with its pseudo-scientific

323

00:13:40,870 --> 00:13:38,639

claims that the gravity wrought by the

324

00:13:43,509 --> 00:13:40,880

moon has a notable effect on the water

325

00:13:46,150 --> 00:13:43,519

within plants and soil

326

00:13:48,389 --> 00:13:46,160

biodynamics makes the further assertion

327

00:13:50,310 --> 00:13:48,399

that the constellations impact growth

328

00:13:51,389 --> 00:13:50,320

and fertility

329

00:13:54,069 --> 00:13:51,399

from

330

00:13:55,829 --> 00:13:54,079

biodynamic.org dot uk

331

00:13:58,150 --> 00:13:55,839

quote

332

00:14:00,550 --> 00:13:58,160

since ancient times the twelve zodiac

333

00:14:03,110 --> 00:14:00,560

constellations have been associated with

334

00:14:05,590 --> 00:14:03,120

each of the four elements

335

00:14:08,230 --> 00:14:05,600

three constellations are connected to

336

00:14:10,150 --> 00:14:08,240

each element and each element is related

337

00:14:12,710 --> 00:14:10,160

to a part of the plant

338

00:14:14,829 --> 00:14:12,720

earth root water leaf

339

00:14:17,910 --> 00:14:14,839

air flower fire

340

00:14:20,150 --> 00:14:17,920

fruit for good carrots and earth root

341

00:14:21,750 --> 00:14:20,160

days should be chosen for lettuce a

342

00:14:24,949 --> 00:14:21,760

water leaf day

343

00:14:27,110 --> 00:14:24,959

beans and apples are fire fruit day etc

344

00:14:29,269 --> 00:14:27,120

end quote

345

00:14:31,350 --> 00:14:29,279

it all seems incredibly prescriptive to

346

00:14:33,269 --> 00:14:31,360

me there's no room for trialling

347

00:14:36,150 --> 00:14:33,279

different and potentially more efficient

348

00:14:40,710 --> 00:14:36,160

or economical methods everything is done

349

00:14:45,509 --> 00:14:42,230

some of the principles found within

350

00:14:48,069 --> 00:14:45,519

biodynamics are ones that i too value

351

00:14:49,829 --> 00:14:48,079

the responsible stewardship of land

352

00:14:52,949 --> 00:14:49,839

recognition of ecosystems and

353

00:14:55,430 --> 00:14:52,959

microclimates minimizing waste

354

00:14:57,750 --> 00:14:55,440

but we can be ethical ecologically aware

355

00:15:00,150 --> 00:14:57,760

and appreciative of agriculturalists or

356

00:15:02,230 --> 00:15:00,160

in my case home gardeners without the

357

00:15:05,110 --> 00:15:02,240

need for dated prescriptive methods or

358

00:15:07,590 --> 00:15:05,120

magical thinking

359

00:15:09,829 --> 00:15:07,600

as for life forces

360

00:15:12,230 --> 00:15:09,839

why do we need supernatural ones

361

00:15:13,910 --> 00:15:12,240

influenced by constellations to be in

362

00:15:16,069 --> 00:15:13,920

aurov

363

00:15:19,110 --> 00:15:16,079

as a home gardener i feel a sense of

364

00:15:21,350 --> 00:15:19,120

amazement at what i see unfold around me

365

00:15:23,590 --> 00:15:21,360

seeds which contain dormant life being

366

00:15:27,269 --> 00:15:23,600

awakened by the right conditions

367

00:15:29,269 --> 00:15:27,279

microcosms of animals plants and fungi

368

00:15:31,910 --> 00:15:29,279

the shapes textures and colours of

369

00:15:33,509 --> 00:15:31,920

leaves fruit flowers and bark

370

00:15:35,750 --> 00:15:33,519

learning how to adjust the properties of

371

00:15:37,990 --> 00:15:35,760

soil to help a plant thrive

372

00:15:40,310 --> 00:15:38,000

witnessing photosynthesis and nutrient

373

00:15:42,470 --> 00:15:40,320

uptake and genetic manipulation by

374

00:15:44,550 --> 00:15:42,480

selective breeding of plants i'm

375

00:15:46,550 --> 00:15:44,560

fascinated by it all

376

00:15:48,389 --> 00:15:46,560

so when somebody tells me that their

377

00:15:50,870 --> 00:15:48,399

method of alternative gardening or

378

00:15:52,790 --> 00:15:50,880

agriculture is more holistic or

379

00:15:55,269 --> 00:15:52,800

considered because they're adopting

380

00:15:57,189 --> 00:15:55,279

supernatural beliefs into their practice

381

00:15:59,030 --> 00:15:57,199

i really want to ask them

382

00:16:02,389 --> 00:15:59,040

isn't what's actually there what's

383

00:16:04,310 --> 00:16:02,399

observable amazing enough

384

00:16:06,629 --> 00:16:04,320

there's a quote from douglas adams of

385

00:16:08,949 --> 00:16:06,639

which i'm particularly fond and in the

386

00:16:11,269 --> 00:16:08,959

context of this report it can be taken

387

00:16:12,470 --> 00:16:11,279

quite literally

388

00:16:14,470 --> 00:16:12,480

quote

389

00:16:17,030 --> 00:16:14,480

isn't it enough to see that a garden is

390

00:16:18,949 --> 00:16:17,040

beautiful without having to believe that

391

00:16:19,910 --> 00:16:18,959

there are fairies at the bottom of it

392

00:16:20,829 --> 00:16:19,920

too

393

00:16:22,629 --> 00:16:20,839

end

394

00:16:24,629 --> 00:16:22,639

quote

395

00:16:26,389 --> 00:16:24,639

for more evidence please keep listening

396

00:16:28,310 --> 00:16:26,399

to the skeptic zone

397

00:16:30,350 --> 00:16:28,320

and as i tell you every week you can

398

00:16:31,910 --> 00:16:30,360

find evidence please at

399

00:16:35,749 --> 00:16:31,920

evidenceplease.net

400

00:16:48,389 --> 00:16:35,759

on facebook and i'm on twitter at joe

401  
00:16:53,829 --> 00:16:49,430  
hi

402  
00:16:56,310 --> 00:16:53,839  
northern rivers vaccination supporters

403  
00:16:58,550 --> 00:16:56,320  
we are a group of concerned citizens

404  
00:17:01,189 --> 00:16:58,560  
dedicated to promoting good science and

405  
00:17:03,430 --> 00:17:01,199  
common sense in our region the far north

406  
00:17:05,909 --> 00:17:03,440  
coast of new south wales

407  
00:17:07,829 --> 00:17:05,919  
this area famous for its natural beauty

408  
00:17:10,470 --> 00:17:07,839  
and relaxed lifestyle

409  
00:17:12,309 --> 00:17:10,480  
also has the lowest rates of vaccination

410  
00:17:14,630 --> 00:17:12,319  
in australia

411  
00:17:17,189 --> 00:17:14,640  
we are out to change that by challenging

412  
00:17:19,029 --> 00:17:17,199  
the myths and misinformation and by

413  
00:17:21,590 --> 00:17:19,039

providing good evidence-based

414

00:17:23,590 --> 00:17:21,600

information to the community

415

00:17:26,710 --> 00:17:23,600

we'd love for you no matter where you

416

00:17:28,950 --> 00:17:26,720

are in the world to join our fight

417

00:17:31,669 --> 00:17:28,960

please visit our webpage

418

00:17:34,470 --> 00:17:31,679

at www dot

419

00:17:37,669 --> 00:17:36,070

we also have a link there to our

420

00:17:39,310 --> 00:17:37,679

facebook page

421

00:17:42,710 --> 00:17:39,320

tweet us at

422

00:17:44,710 --> 00:17:42,720

nrva supporters that's va

423

00:17:46,870 --> 00:17:44,720

and check us out on wikipedia by

424

00:17:48,870 --> 00:17:46,880

searching for northern rivers

425

00:17:57,750 --> 00:17:48,880

vaccination supporters

426

00:18:03,590 --> 00:18:00,710

welcome to a week in science from rios

427

00:18:06,310 --> 00:18:03,600

this week regrowing nerves genes for

428

00:18:15,350 --> 00:18:06,320

migraines and monkeying around with

429

00:18:18,710 --> 00:18:17,190

we used to think that nerves in the

430

00:18:20,950 --> 00:18:18,720

central nervous system couldn't

431

00:18:23,190 --> 00:18:20,960

regenerate after an injury but new

432

00:18:25,510 --> 00:18:23,200

research has not that on the head

433

00:18:27,750 --> 00:18:25,520

microscopic analysis of damaged nerves

434

00:18:29,750 --> 00:18:27,760

in the central nervous system of mice

435

00:18:31,830 --> 00:18:29,760

reveals that they not only regenerate

436

00:18:33,590 --> 00:18:31,840

but they do so at rates comparable to

437

00:18:35,909 --> 00:18:33,600

the regrowth of other parts of the

438

00:18:38,310 --> 00:18:35,919

nervous system the researchers are

439

00:18:40,950 --> 00:18:38,320

unsure why or how this regeneration

440

00:18:43,510 --> 00:18:40,960

happens but the observation opens up new

441

00:18:46,789 --> 00:18:43,520

areas of research into regrowing damaged

442

00:18:52,310 --> 00:18:48,789

there's good news for sports fans this

443

00:18:54,390 --> 00:18:52,320

week humans have evolved for throwing a

444

00:18:56,870 --> 00:18:54,400

number of anatomical features in the

445

00:18:59,590 --> 00:18:56,880

human shoulder have been shown to boost

446

00:19:02,150 --> 00:18:59,600

throwing power and accuracy these

447

00:19:04,310 --> 00:19:02,160

shoulder features only appeared after we

448

00:19:07,029 --> 00:19:04,320

started walking upright when the hands

449

00:19:09,430 --> 00:19:07,039

and arms were free these features date

450

00:19:12,630 --> 00:19:09,440

back at least two million years to our

451  
00:19:14,950 --> 00:19:12,640  
ancestors homo erectus suggesting their

452  
00:19:19,909 --> 00:19:14,960  
anatomy developed to throw spears and

453  
00:19:25,430 --> 00:19:22,070  
12 sites on the human genome have been

454  
00:19:28,390 --> 00:19:25,440  
linked to migraines ants remember visual

455  
00:19:30,789 --> 00:19:28,400  
clues to help find their way home plants

456  
00:19:32,950 --> 00:19:30,799  
accurately measure their stored energy

457  
00:19:35,270 --> 00:19:32,960  
and then calculate how much to use to

458  
00:19:37,029 --> 00:19:35,280  
last them through the night and a strong

459  
00:19:38,950 --> 00:19:37,039  
correlation has been found between

460  
00:19:40,710 --> 00:19:38,960  
people's maths ability and the

461  
00:19:43,669 --> 00:19:40,720  
likelihood that they will default on

462  
00:19:46,549 --> 00:19:43,679  
their home mortgage

463  
00:19:48,870 --> 00:19:46,559

and finally this week monkeys use social

464

00:19:50,710 --> 00:19:48,880

networks to spread ideas

465

00:19:52,630 --> 00:19:50,720

dominant monkeys were isolated from

466

00:19:55,430 --> 00:19:52,640

their troops and shown two different

467

00:19:57,990 --> 00:19:55,440

ways to open a box containing food

468

00:20:00,549 --> 00:19:58,000

either by lifting a flap or pivoting

469

00:20:02,150 --> 00:20:00,559

that flap from side to side when these

470

00:20:04,710 --> 00:20:02,160

monkeys were reintroduced to their

471

00:20:07,270 --> 00:20:04,720

troops researchers followed how quickly

472

00:20:09,590 --> 00:20:07,280

the new behaviors spread they found that

473

00:20:12,549 --> 00:20:09,600

groups organized around a strong central

474

00:20:15,110 --> 00:20:12,559

leader spread the new ideas more quickly

475

00:20:17,510 --> 00:20:15,120

get back to work

476

00:20:20,870 --> 00:20:17,520

more details can be found on our website

477

00:20:22,870 --> 00:20:20,880

rios dot org u that's been the

478

00:20:25,110 --> 00:20:22,880

highlights of another big week in

479

00:20:27,510 --> 00:20:25,120

science for more information on these

480

00:20:30,870 --> 00:20:27,520

and other science news stories go to the

481

00:20:32,470 --> 00:20:30,880

royals website rios dot org dot a u

482

00:20:35,590 --> 00:20:32,480

where you can also sign up for

483

00:20:37,669 --> 00:20:35,600

notifications of future episodes you can

484

00:20:40,710 --> 00:20:37,679

join in the conversation on twitter

485

00:20:43,350 --> 00:20:40,720

using the hashtag week insight i'm paul

486

00:21:15,190 --> 00:20:43,360

willis and on behalf of the rios team

487

00:21:20,630 --> 00:21:18,310

letters from heaven tv psychic lillian

488

00:21:23,590 --> 00:21:20,640

sends almost identical readings to

489

00:21:24,789 --> 00:21:23,600

dozens of customers here's a story out

490

00:21:28,390 --> 00:21:24,799

of the uk

491

00:21:30,789 --> 00:21:28,400

as reported in the [dailyrecord.co.uk](http://dailyrecord.co.uk)

492

00:21:32,789 --> 00:21:30,799

and in other media outlets a well-known

493

00:21:34,710 --> 00:21:32,799

psychic has sent identical

494

00:21:37,029 --> 00:21:34,720

letters from heaven

495

00:21:38,789 --> 00:21:37,039

to dozens of bereaved customers who paid

496

00:21:39,830 --> 00:21:38,799

her to connect with their lost loved

497

00:21:43,029 --> 00:21:39,840

ones

498

00:21:45,430 --> 00:21:43,039

costing around 38 pounds

499

00:21:47,430 --> 00:21:45,440

these letters are claimed to be from

500

00:21:50,789 --> 00:21:47,440

your dear departed

501  
00:21:52,470 --> 00:21:50,799  
residing in heaven television psychic

502  
00:21:54,630 --> 00:21:52,480  
paula bestow

503  
00:21:56,789 --> 00:21:54,640  
better known as lillian

504  
00:21:59,430 --> 00:21:56,799  
apparently sent out many letters to

505  
00:22:02,390 --> 00:21:59,440  
people paying money

506  
00:22:06,390 --> 00:22:02,400  
but all these letters were the same

507  
00:22:09,590 --> 00:22:06,400  
lillian has over 150 000 followers on

508  
00:22:12,230 --> 00:22:09,600  
her facebook page on her website it says

509  
00:22:13,190 --> 00:22:12,240  
a letter from lillian is a mediumship

510  
00:22:15,990 --> 00:22:13,200  
reading

511  
00:22:17,590 --> 00:22:16,000  
she will connect with her guides and the

512  
00:22:20,149 --> 00:22:17,600  
people who are coming through to you

513  
00:22:23,110 --> 00:22:20,159

from spirit to pass on messages from

514

00:22:26,710 --> 00:22:23,120

them that only you will know here with

515

00:22:27,830 --> 00:22:26,720

the help of skeptic trish han in sydney

516

00:22:29,190 --> 00:22:27,840

is a

517

00:22:31,430 --> 00:22:29,200

transcript

518

00:22:32,390 --> 00:22:31,440

of one of the letters sent out by

519

00:22:35,270 --> 00:22:32,400

psychic

520

00:22:37,350 --> 00:22:35,280

lillian to a certain bereaved

521

00:22:40,549 --> 00:22:37,360

daughter have a listen to this and then

522

00:22:44,230 --> 00:22:40,559

we'll discuss some of the aspects of

523

00:22:46,149 --> 00:22:44,240

cold reading and barnum effect or the

524

00:22:47,510 --> 00:22:46,159

floor effect

525

00:22:49,270 --> 00:22:47,520

okay so

526

00:22:51,190 --> 00:22:49,280

as your very beautiful mum bless her

527

00:22:52,789 --> 00:22:51,200

connects with me the very first thing

528

00:22:54,710 --> 00:22:52,799

that she wants you to know

529

00:22:56,870 --> 00:22:54,720

is that she loves you with all her heart

530

00:22:59,909 --> 00:22:56,880

and that she is with her mum and not to

531

00:23:01,909 --> 00:22:59,919

worry she got home safe

532

00:23:04,070 --> 00:23:01,919

she adores you love she says she'll

533

00:23:05,669 --> 00:23:04,080

always be with you on the path of life

534

00:23:07,830 --> 00:23:05,679

right at your side to help comfort and

535

00:23:09,270 --> 00:23:07,840

guide you should you ever need it she'll

536

00:23:11,029 --> 00:23:09,280

be there

537

00:23:13,190 --> 00:23:11,039

she wants you to know to love that she

538

00:23:15,669 --> 00:23:13,200

is very proud of you as she tells me

539

00:23:17,590 --> 00:23:15,679

that you've had a very hard time of late

540

00:23:20,390 --> 00:23:17,600

but she says keep smiling that lovely

541

00:23:22,789 --> 00:23:20,400

smile i'm by your side

542

00:23:25,110 --> 00:23:22,799

she mentions the yellow flowers too and

543

00:23:26,789 --> 00:23:25,120

she says how very beautiful they are and

544

00:23:29,830 --> 00:23:26,799

the new decorating in the house looks

545

00:23:31,590 --> 00:23:29,840

lovely too she loves the colors

546

00:23:33,990 --> 00:23:31,600

she says when you dream of her love she

547

00:23:36,070 --> 00:23:34,000

is visiting you in a sleep state it's

548

00:23:37,990 --> 00:23:36,080

her spirit and when you see the feathers

549

00:23:39,350 --> 00:23:38,000

as well it's mum that's been leaving

550

00:23:41,590 --> 00:23:39,360

them

551  
00:23:44,149 --> 00:23:41,600  
she hears you talk to her you were sat

552  
00:23:46,390 --> 00:23:44,159  
on your bed love not so long ago you was

553  
00:23:47,830 --> 00:23:46,400  
crying you have pine in this bedroom and

554  
00:23:49,510 --> 00:23:47,840  
a light carpet

555  
00:23:51,510 --> 00:23:49,520  
mum was sat there with you putting her

556  
00:23:53,029 --> 00:23:51,520  
arms around you

557  
00:23:54,950 --> 00:23:53,039  
she mentions a baby to come in the

558  
00:23:56,230 --> 00:23:54,960  
family and looks very forward to that as

559  
00:23:58,070 --> 00:23:56,240  
well

560  
00:23:59,830 --> 00:23:58,080  
she loves your hair and tells me you're

561  
00:24:01,350 --> 00:23:59,840  
always messing with it

562  
00:24:04,310 --> 00:24:01,360  
mention someone's getting their teeth

563  
00:24:05,909 --> 00:24:04,320

whitened and a tattoo she sees too

564

00:24:07,990 --> 00:24:05,919

she'll be with you at the church shortly

565

00:24:10,549 --> 00:24:08,000

as well and tells me september is

566

00:24:12,470 --> 00:24:10,559

significant as well as december

567

00:24:14,710 --> 00:24:12,480

she's in no pain

568

00:24:15,909 --> 00:24:14,720

i feel cancer all very similar took your

569

00:24:17,430 --> 00:24:15,919

beautiful mum

570

00:24:19,110 --> 00:24:17,440

she's fine with the rest of your spirit

571

00:24:21,269 --> 00:24:19,120

family

572

00:24:23,990 --> 00:24:21,279

she hands you a red rose love as now she

573

00:24:26,470 --> 00:24:24,000

goes back to spirit saying i will never

574

00:24:30,230 --> 00:24:26,480

leave you i adore you

575

00:24:32,549 --> 00:24:30,240

all of you many blessings to you

576

00:24:34,870 --> 00:24:32,559

so there you go i think you can see

577

00:24:35,669 --> 00:24:34,880

how that could apply

578

00:24:38,470 --> 00:24:35,679

to

579

00:24:39,830 --> 00:24:38,480

possibly thousands of

580

00:24:42,390 --> 00:24:39,840

bereaved

581

00:24:44,950 --> 00:24:42,400

uh sons and daughters thinking about

582

00:24:47,350 --> 00:24:44,960

their mother the message that keeps on

583

00:24:49,510 --> 00:24:47,360

really being repeated here is

584

00:24:50,470 --> 00:24:49,520

uh mother's okay and she's sending you

585

00:24:52,230 --> 00:24:50,480

love

586

00:24:54,870 --> 00:24:52,240

now this is

587

00:24:57,110 --> 00:24:54,880

almost universal certainly with the

588

00:24:58,789 --> 00:24:57,120

investigations i've done over many years

589

00:25:00,950 --> 00:24:58,799

this comes through again and again and

590

00:25:03,110 --> 00:25:00,960

again when so-called psychics contact

591

00:25:06,070 --> 00:25:03,120

the deer departed the deer departed

592

00:25:08,070 --> 00:25:06,080

always pretty well they're happy and

593

00:25:09,750 --> 00:25:08,080

they're sending you lots of love and

594

00:25:10,710 --> 00:25:09,760

they're wanting you to know that they're

595

00:25:12,230 --> 00:25:10,720

just

596

00:25:13,750 --> 00:25:12,240

fine and they're seeing their old

597

00:25:15,430 --> 00:25:13,760

friends and family

598

00:25:17,350 --> 00:25:15,440

you really don't get the situation where

599

00:25:19,990 --> 00:25:17,360

the deer departed says

600

00:25:20,789 --> 00:25:20,000

get me out of here it's horrible

601  
00:25:22,710 --> 00:25:20,799  
or

602  
00:25:24,710 --> 00:25:22,720  
i really hate you and i'm glad i'm not

603  
00:25:26,549 --> 00:25:24,720  
seeing you anymore or things like that

604  
00:25:28,310 --> 00:25:26,559  
the point is of course that if this

605  
00:25:29,990 --> 00:25:28,320  
liliana's

606  
00:25:31,350 --> 00:25:30,000  
providing a

607  
00:25:33,830 --> 00:25:31,360  
service here

608  
00:25:37,269 --> 00:25:33,840  
surely this is a matter for

609  
00:25:39,669 --> 00:25:37,279  
the consumer affairs the fair trading

610  
00:25:41,750 --> 00:25:39,679  
in the uk to investigate but these

611  
00:25:44,549 --> 00:25:41,760  
statements that lillian was coming up

612  
00:25:46,870 --> 00:25:44,559  
with she mentions the yellow flowers too

613  
00:25:48,549 --> 00:25:46,880

and she says how beautiful they were and

614

00:25:50,870 --> 00:25:48,559

the new decoration in the house looks

615

00:25:53,269 --> 00:25:50,880

lovely too she loves the colors she says

616

00:25:55,029 --> 00:25:53,279

that when you dream of her love

617

00:25:57,510 --> 00:25:55,039

all this sort of stuff she's visiting

618

00:25:59,510 --> 00:25:57,520

you in a sleep state it's her spirit she

619

00:26:01,590 --> 00:25:59,520

mentioned someone getting their teeth

620

00:26:05,830 --> 00:26:01,600

whitened and a tattoo

621

00:26:07,990 --> 00:26:05,840

oh by the way there is spelt t-h-e-r-e

622

00:26:09,990 --> 00:26:08,000

their teeth whitened all these are what

623

00:26:12,549 --> 00:26:10,000

we call barnum statements or for or

624

00:26:14,870 --> 00:26:12,559

statements for effect barnum effect

625

00:26:17,029 --> 00:26:14,880

it's all part of uh cold reading this is

626  
00:26:18,789 --> 00:26:17,039  
the sort of cold reading you can do

627  
00:26:20,789 --> 00:26:18,799  
without actually being

628  
00:26:23,269 --> 00:26:20,799  
present with a person to

629  
00:26:25,350 --> 00:26:23,279  
interact with their feedback

630  
00:26:27,029 --> 00:26:25,360  
which most so-called psychics do when

631  
00:26:29,909 --> 00:26:27,039  
they're sitting with somebody

632  
00:26:32,870 --> 00:26:29,919  
they'll basically ask them questions and

633  
00:26:35,029 --> 00:26:32,880  
feed off the feedback and on it goes

634  
00:26:37,590 --> 00:26:35,039  
these statements of lillian reminded me

635  
00:26:39,909 --> 00:26:37,600  
very much of an experiment james randy

636  
00:26:41,909 --> 00:26:39,919  
did way back in the early 90s

637  
00:26:44,310 --> 00:26:41,919  
as part of the tv show

638  
00:26:46,070 --> 00:26:44,320

secrets of the psychics

639

00:26:49,909 --> 00:26:46,080

which was produced by

640

00:26:51,830 --> 00:26:49,919

pbs the nova program now if you google

641

00:26:53,190 --> 00:26:51,840

secrets of the psychics james randy

642

00:26:56,230 --> 00:26:53,200

you'll see the whole video it's quite

643

00:26:59,029 --> 00:26:56,240

good it's um it's actually a really

644

00:27:01,029 --> 00:26:59,039

really worth watching but here's a clip

645

00:27:04,310 --> 00:27:01,039

here's a clip from that

646

00:27:06,710 --> 00:27:04,320

documentary with james randy

647

00:27:08,470 --> 00:27:06,720

with a group of university students

648

00:27:10,710 --> 00:27:08,480

demonstrating to them

649

00:27:11,830 --> 00:27:10,720

the uh the power of these barnum type

650

00:27:14,310 --> 00:27:11,840

statements

651  
00:27:16,230 --> 00:27:14,320  
he's in a room a classroom and he hands

652  
00:27:18,310 --> 00:27:16,240  
out lots of uh

653  
00:27:20,710 --> 00:27:18,320  
astrology charts

654  
00:27:23,669 --> 00:27:20,720  
to the students

655  
00:27:26,310 --> 00:27:23,679  
the trickster never works alone

656  
00:27:28,630 --> 00:27:26,320  
his audience assists him

657  
00:27:29,830 --> 00:27:28,640  
if he does his job well they want to be

658  
00:27:31,510 --> 00:27:29,840  
fooled

659  
00:27:35,029 --> 00:27:31,520  
uh sherlock

660  
00:27:42,230 --> 00:27:37,350  
for the astrology test each student was

661  
00:27:46,070 --> 00:27:43,990  
they were told it was drawn up by a

662  
00:27:47,830 --> 00:27:46,080  
professional based on information they

663  
00:27:49,430 --> 00:27:47,840

had supplied about when and where they

664

00:27:51,830 --> 00:27:49,440

were born

665

00:27:53,990 --> 00:27:51,840

actually these horoscopes were not quite

666

00:27:55,430 --> 00:27:54,000

what they appeared to be

667

00:27:56,870 --> 00:27:55,440

i'd like you to share something with me

668

00:27:58,789 --> 00:27:56,880

if you'd be so conscious with this show

669

00:28:01,830 --> 00:27:58,799

i asked the students to grade them for

670

00:28:04,149 --> 00:28:01,840

accuracy on a scale of one to five five

671

00:28:08,070 --> 00:28:04,159

being the most accurate uh how many gave

672

00:28:12,310 --> 00:28:10,070

two

673

00:28:13,750 --> 00:28:12,320

three

674

00:28:15,590 --> 00:28:13,760

four

675

00:28:18,149 --> 00:28:15,600

and five

676

00:28:19,669 --> 00:28:18,159

okay so we scored pretty highly with

677

00:28:21,110 --> 00:28:19,679

this

678

00:28:22,870 --> 00:28:21,120

let's do a little experiment you've got

679

00:28:24,470 --> 00:28:22,880

your horoscopes right in front of you

680

00:28:26,230 --> 00:28:24,480

take them in your hand like this and

681

00:28:28,549 --> 00:28:26,240

hand them over your shoulder to the

682

00:28:30,149 --> 00:28:28,559

person behind you okay everybody and the

683

00:28:31,510 --> 00:28:30,159

guy at the end down there you'll have to

684

00:28:34,070 --> 00:28:31,520

come up to the front because these

685

00:28:35,430 --> 00:28:34,080

people in the front don't have one now

686

00:28:37,029 --> 00:28:35,440

okay

687

00:28:39,510 --> 00:28:37,039

everybody change them around everybody's

688

00:28:48,470 --> 00:28:39,520

gotta open up somebody else's horoscope

689

00:28:48,480 --> 00:28:55,110

they had all received the same horoscope

690

00:28:59,669 --> 00:28:56,630

the personality descriptions were

691

00:29:00,950 --> 00:28:59,679

generally true of everyone like recently

692

00:29:03,350 --> 00:29:00,960

you have had to recover from a

693

00:29:05,510 --> 00:29:03,360

disappointment

694

00:29:07,190 --> 00:29:05,520

some of them seem specific because they

695

00:29:09,190 --> 00:29:07,200

were so personal

696

00:29:12,070 --> 00:29:09,200

your sexual adjustment has presented

697

00:29:13,990 --> 00:29:12,080

some problems for you

698

00:29:16,149 --> 00:29:14,000

and there were others that anyone might

699

00:29:19,669 --> 00:29:16,159

hope would be true

700

00:29:22,549 --> 00:29:19,679

you have a great deal of unused capacity

701  
00:29:23,909 --> 00:29:22,559  
people like to believe certain things

702  
00:29:26,870 --> 00:29:23,919  
are true

703  
00:29:28,149 --> 00:29:26,880  
and they like to fall for very specific

704  
00:29:30,950 --> 00:29:28,159  
absolutely

705  
00:29:32,870 --> 00:29:30,960  
enormously accurate horoscopes right

706  
00:29:34,789 --> 00:29:32,880  
of course they are did you have a

707  
00:29:37,990 --> 00:29:34,799  
question yes i have a question so why do

708  
00:29:40,070 --> 00:29:38,000  
people persist in uh ascribing to these

709  
00:29:41,590 --> 00:29:40,080  
systems

710  
00:29:43,750 --> 00:29:41,600  
the big question of course and

711  
00:29:45,990 --> 00:29:43,760  
psychologically that is the most

712  
00:29:47,590 --> 00:29:46,000  
interesting question i think that people

713  
00:29:49,029 --> 00:29:47,600

are trying to get some control over

714

00:29:51,029 --> 00:29:49,039

their lives by knowing more about

715

00:29:53,029 --> 00:29:51,039

themselves of course they get control

716

00:29:55,750 --> 00:29:53,039

over their lives but that's what we're

717

00:29:58,070 --> 00:29:55,760

doing all of us each and every day of

718

00:29:59,909 --> 00:29:58,080

our lives whether it's financial whether

719

00:30:01,669 --> 00:29:59,919

it's emotional whether it's a love

720

00:30:03,350 --> 00:30:01,679

interest whether it's health we're

721

00:30:06,470 --> 00:30:03,360

trying to get control of our lives we're

722

00:30:08,630 --> 00:30:06,480

looking for power and astrology offers

723

00:30:10,950 --> 00:30:08,640

you apparently a very old and a very

724

00:30:14,149 --> 00:30:10,960

easy formula whereby you can do that

725

00:30:16,149 --> 00:30:14,159

sort of thing so all the papers randy

726  
00:30:17,190 --> 00:30:16,159  
was passing out to the students were all

727  
00:30:19,909 --> 00:30:17,200  
the same

728  
00:30:23,990 --> 00:30:19,919  
many years ago i wrote to randy

729  
00:30:26,389 --> 00:30:24,000  
and asked him if i could use that

730  
00:30:28,549 --> 00:30:26,399  
series of statements myself in the mr

731  
00:30:29,510 --> 00:30:28,559  
investigators show the show i do

732  
00:30:31,430 --> 00:30:29,520  
with uh

733  
00:30:33,669 --> 00:30:31,440  
maynard and dr rachie and my friend ian

734  
00:30:35,669 --> 00:30:33,679  
bryce from time to time and for many

735  
00:30:38,710 --> 00:30:35,679  
years now we've been using those very

736  
00:30:40,870 --> 00:30:38,720  
statements in our live show here is the

737  
00:30:43,430 --> 00:30:40,880  
full transcript of what randy sent me

738  
00:30:44,950 --> 00:30:43,440

slightly modified for

739

00:30:46,789 --> 00:30:44,960

use in the

740

00:30:49,350 --> 00:30:46,799

in the high schools in the primary

741

00:30:52,149 --> 00:30:49,360

schools it works very well

742

00:30:58,789 --> 00:30:52,159

we normally get scores in the 80s to 90

743

00:31:04,630 --> 00:31:01,830

astrological sign aquarius

744

00:31:06,230 --> 00:31:04,640

january 20 to february 18th

745

00:31:09,110 --> 00:31:06,240

please do not discuss with other

746

00:31:10,149 --> 00:31:09,120

students any of the contents of this

747

00:31:12,870 --> 00:31:10,159

private

748

00:31:15,190 --> 00:31:12,880

personal analysis

749

00:31:16,630 --> 00:31:15,200

the following is an analysis based on

750

00:31:18,630 --> 00:31:16,640

your star sign

751  
00:31:21,430 --> 00:31:18,640  
all of the information has been and will

752  
00:31:23,510 --> 00:31:21,440  
be kept strictly confidential

753  
00:31:25,590 --> 00:31:23,520  
your personal analysis

754  
00:31:27,110 --> 00:31:25,600  
while at times you have serious doubts

755  
00:31:29,430 --> 00:31:27,120  
as to whether you've made the right

756  
00:31:31,430 --> 00:31:29,440  
decision or done the right thing

757  
00:31:32,630 --> 00:31:31,440  
you are disciplined and controlled on

758  
00:31:35,430 --> 00:31:32,640  
the outside

759  
00:31:36,789 --> 00:31:35,440  
you tend to be worrisome and insecure on

760  
00:31:39,110 --> 00:31:36,799  
the inside

761  
00:31:41,669 --> 00:31:39,120  
your basic intuitions usually prove

762  
00:31:45,029 --> 00:31:41,679  
right and you are an excellent judge of

763  
00:31:46,789 --> 00:31:45,039

character your sense of humor is notable

764

00:31:48,950 --> 00:31:46,799

you believe that everyone should look

765

00:31:52,389 --> 00:31:48,960

out for themselves you are willing to

766

00:31:54,710 --> 00:31:52,399

help others when they have difficulties

767

00:31:56,310 --> 00:31:54,720

you obtain great satisfaction from doing

768

00:31:58,070 --> 00:31:56,320

small kindnesses

769

00:31:59,830 --> 00:31:58,080

even when your action may not be

770

00:32:01,750 --> 00:31:59,840

recognized by others

771

00:32:04,630 --> 00:32:01,760

though you are a person who tends to be

772

00:32:06,389 --> 00:32:04,640

forgiving of other people's faults and

773

00:32:08,470 --> 00:32:06,399

you try to trust them once an

774

00:32:11,190 --> 00:32:08,480

acquaintance has proved to be dishonest

775

00:32:13,830 --> 00:32:11,200

or unworthy of your confidence you watch

776

00:32:14,950 --> 00:32:13,840

them carefully your chart shows a great

777

00:32:17,350 --> 00:32:14,960

interest

778

00:32:20,470 --> 00:32:17,360

you may be thinking of a human services

779

00:32:22,470 --> 00:32:20,480

career if not you certainly should

780

00:32:23,909 --> 00:32:22,480

you would be very successful in such a

781

00:32:27,350 --> 00:32:23,919

profession

782

00:32:29,190 --> 00:32:27,360

your sign of aquarius also shows a love

783

00:32:31,590 --> 00:32:29,200

of animals

784

00:32:33,269 --> 00:32:31,600

occasionally your aspirations tend to be

785

00:32:36,870 --> 00:32:33,279

pretty unrealistic

786

00:32:39,430 --> 00:32:36,880

at times extroverted affable sociable

787

00:32:41,509 --> 00:32:39,440

while other times you are introverted

788

00:32:44,070 --> 00:32:41,519

wary and reserved

789

00:32:46,230 --> 00:32:44,080

you have found it unwise to be too frank

790

00:32:48,149 --> 00:32:46,240

in revealing yourself to others

791

00:32:51,029 --> 00:32:48,159

you pride yourself on being an

792

00:32:53,509 --> 00:32:51,039

independent thinker and do not accept

793

00:32:54,549 --> 00:32:53,519

others opinions without satisfactory

794

00:32:56,710 --> 00:32:54,559

proof

795

00:32:59,430 --> 00:32:56,720

you prefer a certain amount of change in

796

00:33:01,110 --> 00:32:59,440

variety and become dissatisfied when

797

00:33:02,389 --> 00:33:01,120

hemmed in by restrictions and

798

00:33:04,789 --> 00:33:02,399

limitations

799

00:33:06,870 --> 00:33:04,799

your family at time has presented some

800

00:33:09,029 --> 00:33:06,880

problems for you while you have some

801  
00:33:11,830 --> 00:33:09,039  
personal weaknesses you are generally

802  
00:33:15,110 --> 00:33:11,840  
able to compensate for them you have a

803  
00:33:17,269 --> 00:33:15,120  
great deal of unused capacity

804  
00:33:18,470 --> 00:33:17,279  
which you have not turned to your

805  
00:33:20,630 --> 00:33:18,480  
advantage

806  
00:33:22,710 --> 00:33:20,640  
you have a tendency to be critical of

807  
00:33:24,870 --> 00:33:22,720  
yourself you have a strong need for

808  
00:33:26,470 --> 00:33:24,880  
other people to like you and for them to

809  
00:33:27,909 --> 00:33:26,480  
admire you

810  
00:33:30,149 --> 00:33:27,919  
you have had to recover from a

811  
00:33:31,669 --> 00:33:30,159  
disappointment and you have determined

812  
00:33:33,590 --> 00:33:31,679  
to overcome it

813  
00:33:35,830 --> 00:33:33,600

you can expect a new person to enter

814

00:33:38,789 --> 00:33:35,840

your life a person who may have come to

815

00:33:40,789 --> 00:33:38,799

your attention during the last 12 days

816

00:33:42,950 --> 00:33:40,799

travel is showing up in your plans an

817

00:33:45,990 --> 00:33:42,960

unexpected trip that is brought about by

818

00:33:48,549 --> 00:33:46,000

a new element in your day-to-day routine

819

00:33:50,870 --> 00:33:48,559

because of this change do not enter into

820

00:33:54,310 --> 00:33:50,880

money matters no matter how minor

821

00:33:56,470 --> 00:33:54,320

without very serious consideration

822

00:33:58,549 --> 00:33:56,480

this is a critical moon

823

00:34:01,110 --> 00:33:58,559

saturn period for you

824

00:34:03,430 --> 00:34:01,120

and your health circumstances can be

825

00:34:06,710 --> 00:34:03,440

important be determined to weather this

826

00:34:17,349 --> 00:34:06,720

situation and depend on your good common

827

00:34:20,710 --> 00:34:19,030

now maybe you can see the similarities

828

00:34:21,909 --> 00:34:20,720

between that

829

00:34:23,990 --> 00:34:21,919

and the

830

00:34:25,510 --> 00:34:24,000

statements given out by

831

00:34:26,629 --> 00:34:25,520

so-called psychic

832

00:34:29,270 --> 00:34:26,639

lillian

833

00:34:31,510 --> 00:34:29,280

these statements are designed to apply

834

00:34:34,710 --> 00:34:31,520

to many people

835

00:34:37,270 --> 00:34:34,720

and i'm sure you yourself

836

00:34:39,430 --> 00:34:37,280

could relate to a lot of what

837

00:34:41,750 --> 00:34:39,440

i just read out there in that

838

00:34:42,790 --> 00:34:41,760

astrology chart

839

00:34:45,510 --> 00:34:42,800

now

840

00:34:47,349 --> 00:34:45,520

of course it's possible that lillian

841

00:34:49,510 --> 00:34:47,359

sent out the same message to lots of

842

00:34:52,310 --> 00:34:49,520

people by error

843

00:34:53,589 --> 00:34:52,320

we can't uh rule that out at the moment

844

00:34:55,909 --> 00:34:53,599

but

845

00:34:57,670 --> 00:34:55,919

even if this one was intended for one

846

00:34:59,589 --> 00:34:57,680

person

847

00:35:01,349 --> 00:34:59,599

even if the statement she sent was

848

00:35:02,950 --> 00:35:01,359

intended for one person

849

00:35:06,230 --> 00:35:02,960

it's

850

00:35:08,310 --> 00:35:06,240

absolutely textbook 101

851  
00:35:09,670 --> 00:35:08,320  
barnum statements

852  
00:35:11,990 --> 00:35:09,680  
and

853  
00:35:24,550 --> 00:35:12,000  
a very poor message

854  
00:35:24,560 --> 00:35:30,150  
foreign

855  
00:35:34,870 --> 00:35:32,630  
is an award-winning weekly science show

856  
00:35:36,470 --> 00:35:34,880  
in french hosted by a bunch of crazy

857  
00:35:38,950 --> 00:35:36,480  
enthusiasts

858  
00:35:41,190 --> 00:35:38,960  
we are convinced that the greatest ideas

859  
00:35:43,270 --> 00:35:41,200  
in science are quite easy to grasp as

860  
00:35:45,829 --> 00:35:43,280  
long as they are presented with passion

861  
00:35:48,310 --> 00:35:45,839  
using a vocabulary common to all curious

862  
00:35:49,589 --> 00:35:48,320  
minds whatever their academic background

863  
00:35:51,670 --> 00:35:49,599

if any

864

00:35:52,950 --> 00:35:51,680

you don't understand french yet why it's

865

00:35:54,550 --> 00:35:52,960

never too late

866

00:35:56,390 --> 00:35:54,560

all our stories have a written

867

00:35:58,550 --> 00:35:56,400

transcript on the website and people

868

00:36:01,190 --> 00:35:58,560

from all around the world are using our

869

00:36:03,829 --> 00:36:01,200

content to learn malia's language

870

00:36:06,510 --> 00:36:03,839

our topics range from zero to infinity

871

00:36:08,310 --> 00:36:06,520

from evolution to artificial life from

872

00:36:09,589 --> 00:36:08,320

electromagnetism to the science of

873

00:36:12,069 --> 00:36:09,599

introverts

874

00:36:15,670 --> 00:36:12,079

we just love mathematics science

875

00:36:17,349 --> 00:36:15,680

critical thinking so do you want to join

876

00:36:19,150 --> 00:36:17,359

you can subscribe to the podcast for

877

00:36:21,910 --> 00:36:19,160

free from our website

878

00:36:24,630 --> 00:36:21,920

podcastscience.fm that's in one word you

879

00:36:27,829 --> 00:36:24,640

also find us on itunes and soundcloud

880

00:36:50,470 --> 00:36:27,839

see you soon hopefully at the versace or

881

00:36:55,270 --> 00:36:52,390

now here's a special announcement for

882

00:36:58,310 --> 00:36:55,280

people in the reading area of the uk

883

00:37:01,190 --> 00:36:58,320

this monday the 15th of february see

884

00:37:03,750 --> 00:37:01,200

michael marshall live in the flesh

885

00:37:06,230 --> 00:37:03,760

giving a talk lifting the lid ongoing

886

00:37:08,069 --> 00:37:06,240

adventures in the world of pseudoscience

887

00:37:09,430 --> 00:37:08,079

the event is hosted by the reading

888

00:37:12,790 --> 00:37:09,440

skeptics

889

00:37:14,310 --> 00:37:12,800

now this kicks off at 7 30 at the rynd

890

00:37:17,670 --> 00:37:14,320

restaurant

891

00:37:20,310 --> 00:37:17,680

at 11 castle street in reading

892

00:37:22,550 --> 00:37:20,320

now the blurb says it's easy to think of

893

00:37:24,950 --> 00:37:22,560

pseudoscience existing in a glass case

894

00:37:28,069 --> 00:37:24,960

at the museum something to be examined

895

00:37:30,550 --> 00:37:28,079

and critiqued from a safe distance but

896

00:37:32,550 --> 00:37:30,560

not something to touch and play with

897

00:37:35,030 --> 00:37:32,560

using examples taken from his own

898

00:37:36,630 --> 00:37:35,040

personal experiences and skepticism

899

00:37:38,230 --> 00:37:36,640

michael marshall will show you what

900

00:37:41,109 --> 00:37:38,240

happens when you begin to crack the

901  
00:37:43,750 --> 00:37:41,119  
surface of the pseudo sciences that

902  
00:37:45,910 --> 00:37:43,760  
surround us revealing the surprising

903  
00:37:48,310 --> 00:37:45,920  
sometimes shocking and often comic

904  
00:37:50,550 --> 00:37:48,320  
adventures that lie beneath

905  
00:37:52,710 --> 00:37:50,560  
michael marshall is the project director

906  
00:37:55,030 --> 00:37:52,720  
of the good thinking society and the

907  
00:37:57,109 --> 00:37:55,040  
vice president of the merseyside skeptic

908  
00:37:59,829 --> 00:37:57,119  
society he regularly speaks with

909  
00:38:01,750 --> 00:37:59,839  
proponents of pseudoscience for the be

910  
00:38:03,670 --> 00:38:01,760  
reasonable podcast

911  
00:38:06,390 --> 00:38:03,680  
his work has seen him organizing

912  
00:38:09,430 --> 00:38:06,400  
international homeopathy protests and

913  
00:38:10,950 --> 00:38:09,440

co-founding the popular qed conference

914

00:38:13,349 --> 00:38:10,960

he was written for the guardian the

915

00:38:15,750 --> 00:38:13,359

times the new statement is a regular

916

00:38:17,510 --> 00:38:15,760

guest on the skeptic's own podcast and

917

00:38:19,829 --> 00:38:17,520

spoke in sydney australia at the

918

00:38:21,030 --> 00:38:19,839

australian skeptics convention

919

00:38:22,710 --> 00:38:21,040

what a guy

920

00:38:24,310 --> 00:38:22,720

so there's your clue there's your hint

921

00:38:27,109 --> 00:38:24,320

there's your motivation those people in

922

00:38:29,109 --> 00:38:27,119

the reading area or anywhere in the uk

923

00:38:30,829 --> 00:38:29,119

or europe or north america or china or

924

00:38:33,829 --> 00:38:30,839

wherever get to

925

00:38:35,430 --> 00:38:33,839

reading monday the 15th

926  
00:38:37,990 --> 00:38:35,440  
7 30 to hear

927  
00:39:01,349 --> 00:38:38,000  
michael marshall for more information

928  
00:39:04,310 --> 00:39:03,190  
thank you for listening to the skeptic

929  
00:39:06,550 --> 00:39:04,320  
zone

930  
00:39:08,150 --> 00:39:06,560  
now don't forget to

931  
00:39:10,829 --> 00:39:08,160  
visit the website of our reporter

932  
00:39:14,870 --> 00:39:12,870  
[www.maynard.com.edu](http://www.maynard.com.edu) for his podcast

933  
00:39:16,630 --> 00:39:14,880  
bunga bunga he does with tim ferguson

934  
00:39:19,190 --> 00:39:16,640  
from the doug anthony all-stars and lots

935  
00:39:20,550 --> 00:39:19,200  
of other maynard madness and we look

936  
00:39:22,950 --> 00:39:20,560  
forward to some more reports from

937  
00:39:25,109 --> 00:39:22,960  
maynard soon as we look forward to more

938  
00:39:27,030 --> 00:39:25,119

reports from our other reporter

939

00:39:29,109 --> 00:39:27,040

heidi robertson right up there on the

940

00:39:31,510 --> 00:39:29,119

north coast of new south wales

941

00:39:32,870 --> 00:39:31,520

and dr raichi when she has time she's so

942

00:39:35,510 --> 00:39:32,880

busy doing

943

00:39:38,069 --> 00:39:35,520

very important scientific work but for

944

00:39:39,190 --> 00:39:38,079

this week from the lovely little

945

00:39:42,390 --> 00:39:39,200

township

946

00:39:47,510 --> 00:39:42,400

of jamboree this is richard saunders

947

00:39:53,069 --> 00:39:49,190

you've been listening to the skeptic

948

00:39:55,430 --> 00:39:53,079

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00:40:01,510 --> 00:39:58,880

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